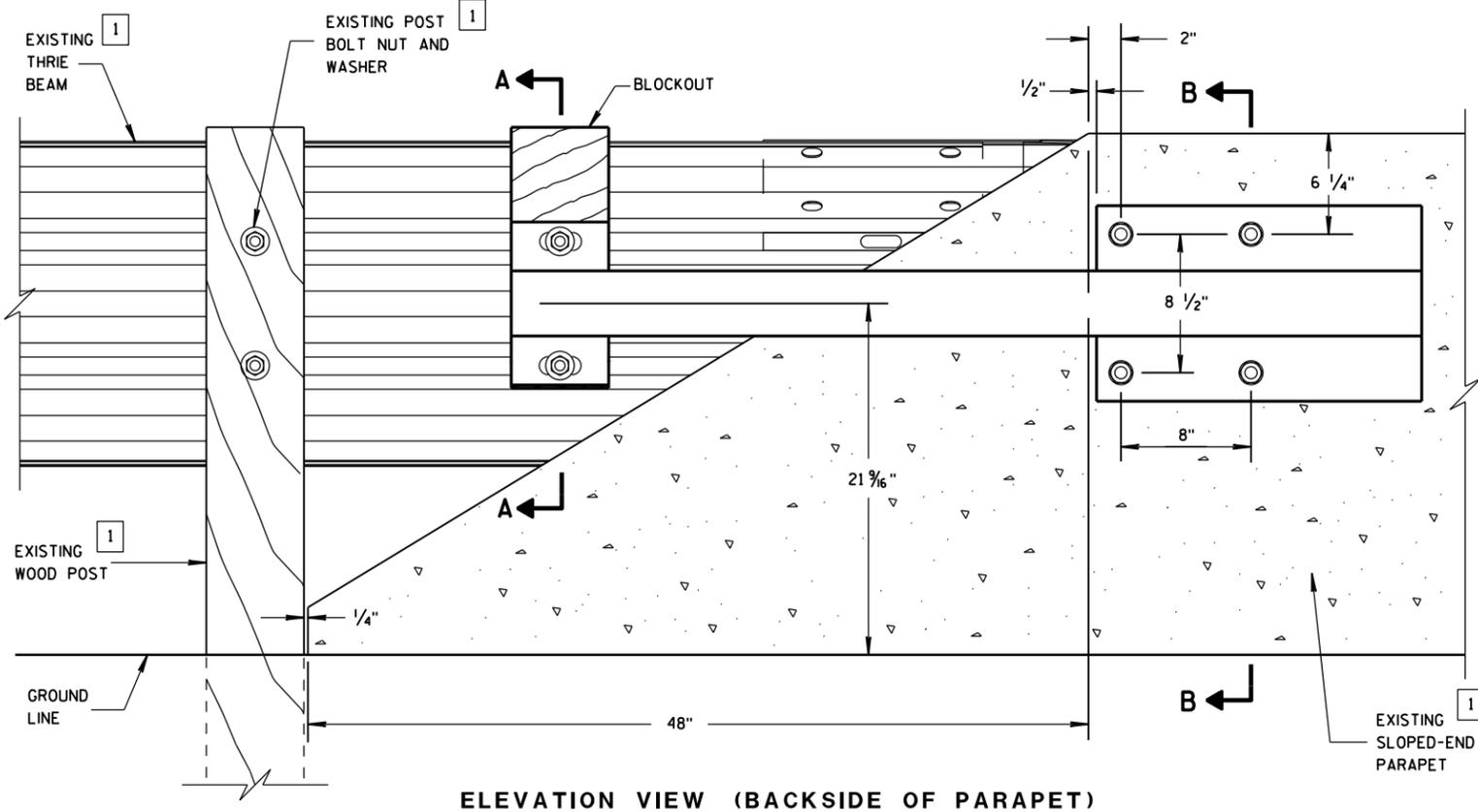


# SDD 14B49-a Retrofit Cantilever Sloped End - Elevation, Section Detail Installation and Bill of Materials



ELEVATION VIEW (BACKSIDE OF PARAPET)

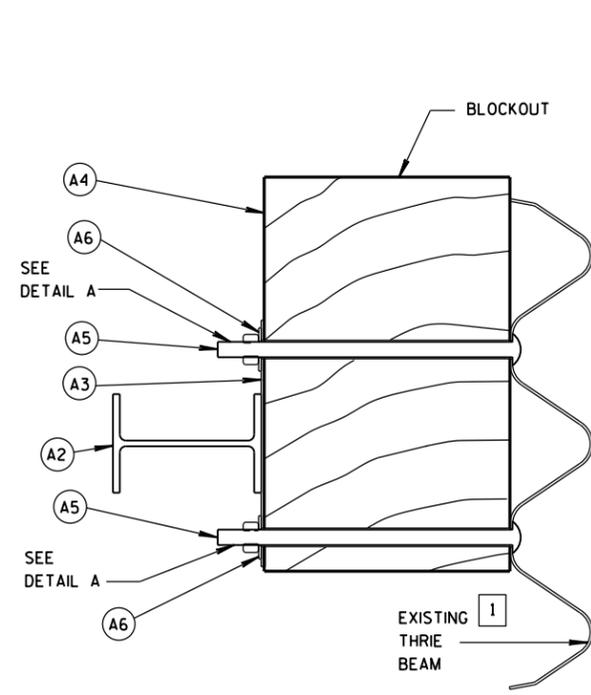
## GENERAL NOTES

- THE ADHESIVE USED TO SECURE THREADED RODS MUST HAVE MINIMUM BOND STRENGTHS OF 1800 PSI FOR EMBEDMENT SHOWN.
- ANY EXISTING THROUGH-BOLT INTERFERING WITH THE PLACEMENT OF THIS COMPONENT SHALL BE REPLACED WITH A SHORTER EPOXED BOLT.

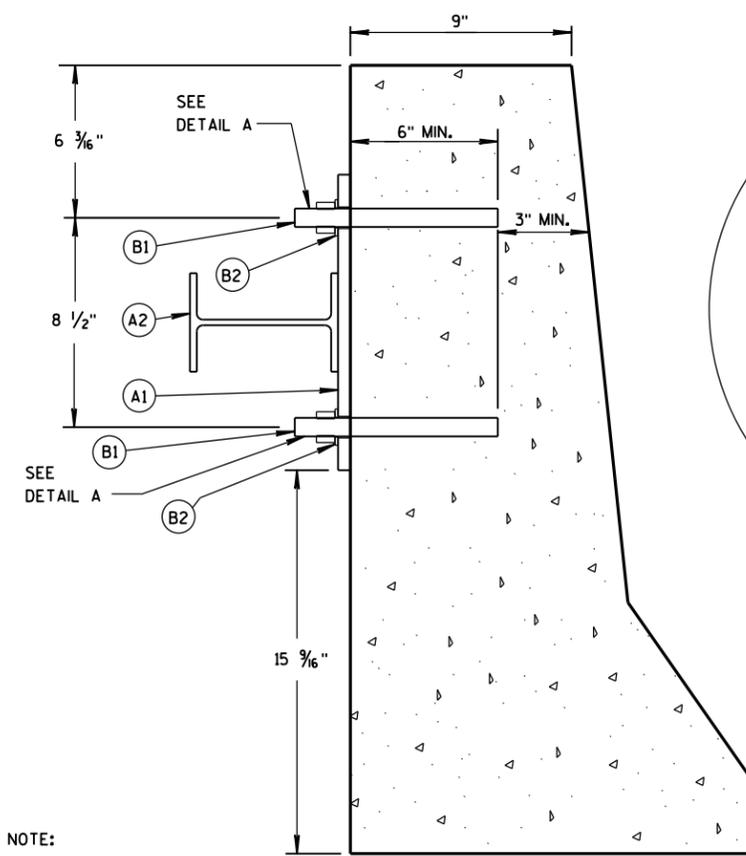
1 SEE OTHER PARTS OF THE PLAN OR STANDARD SPECIFICATIONS.

SLOPED END PARAPET RETROFIT BILL OF MATERIALS			
ITEM NO.	QTY.	DESCRIPTION	MATERIAL SPECIFICATION
(A1)	1	20" x 12" x 1/2" BASE PLATE	ASTM A572 GR. 50
(A2)	1	55" LONG W6x12 BEAM	ASTM A992 GR. 50
(A3)	1	6" x 10" x 1/8" BACKUP PLATE	ASTM A36
(A4)	1	6" x 10" x 16" BLOCKOUT	1
(A5)	2	5/8" DIA. POST BOLT AND DOUBLE RECESSED (DR) HEAVY HEX NUT	1
(A6)	2	5/8" DIA. FLAT WASHER	GRADE 5
(B1)	4	3/4" DIA. - 10 UNC THREADED ROD	ASTM A193 TYPE B7
(B2)	4	3/4" DIA. FLAT WASHER	ASTM F436
(B3)	4	3/4" DIA. DOUBLE RECESSED (DR) HEAVY HEX NUT	1

6

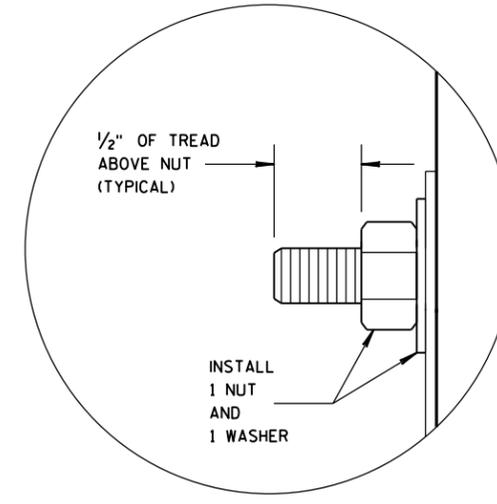


SECTION A-A

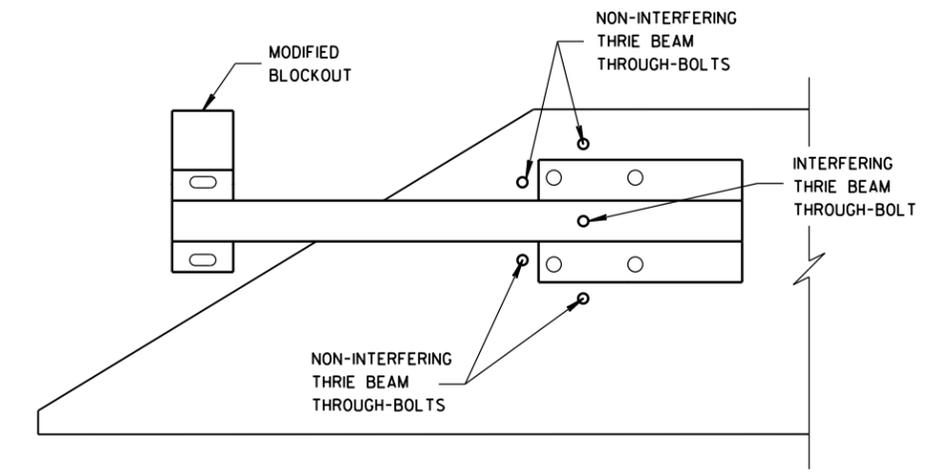


SECTION B-B

NOTE:  
THRIE BEAM AND CONNECTION  
HARDWARE NOT SHOWN IN  
SECTION B-B FOR CLARITY.



DETAIL A



THRIE BEAM THROUGH-BOLT CONFLICT

6

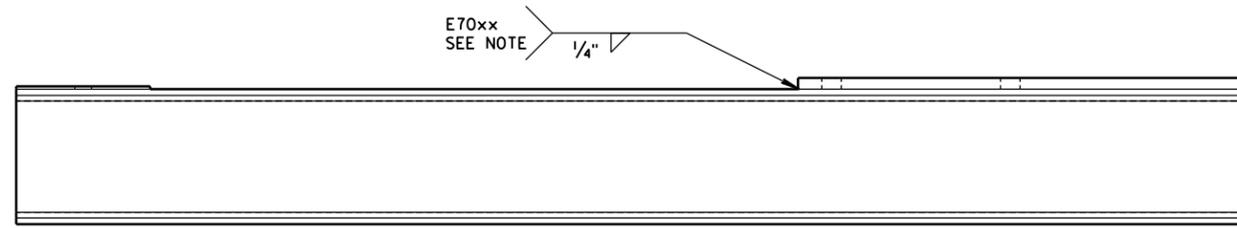
S.D.D. 14 B 49-1a

S.D.D. 14 B 49-1a

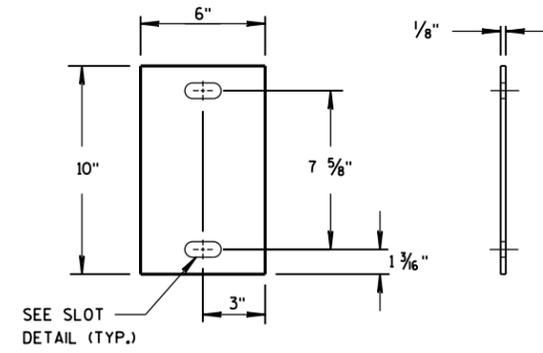
RETROFIT CANTILEVER  
SLOPED END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

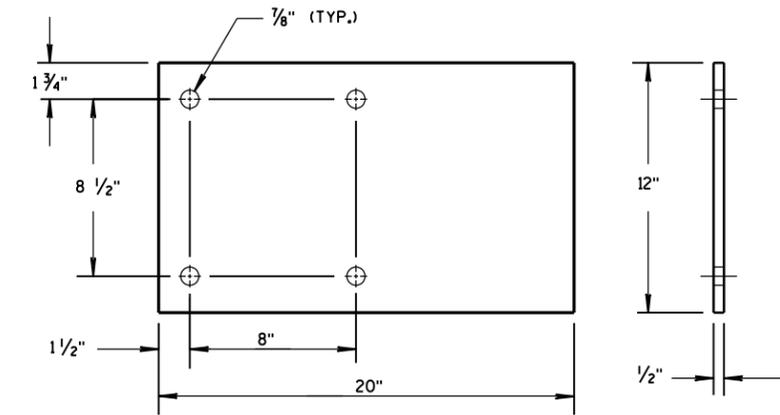
# SDD 14B49-b Retrofit Cantilever Sloped End - Anchor Plate Assembly Parts and Component Details



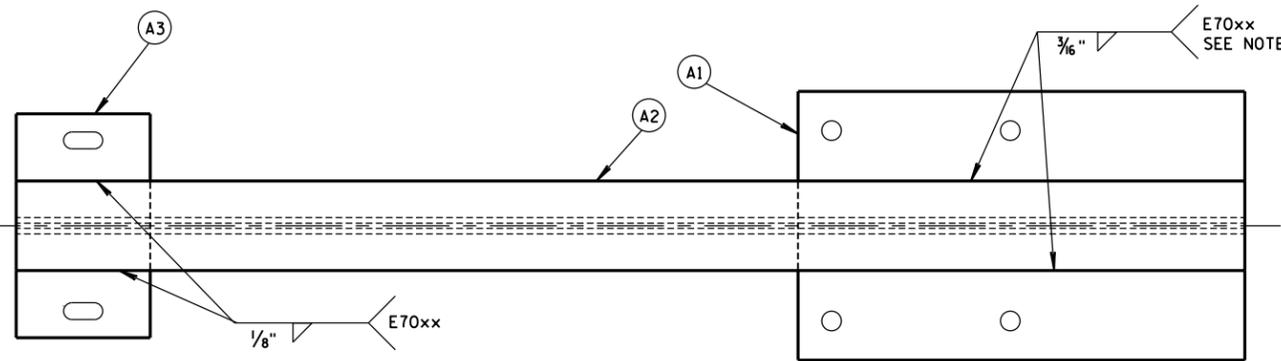
PLAN VIEW



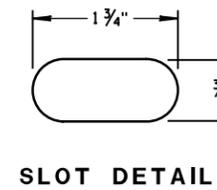
BLACKUP PLATE (A3)



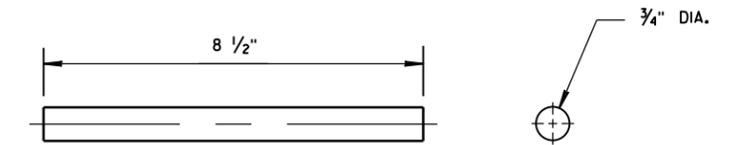
BASE PLATE (A1)



ELEVATION VIEW



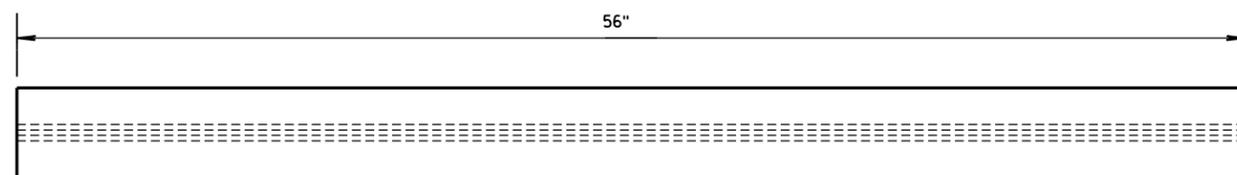
SLOT DETAIL



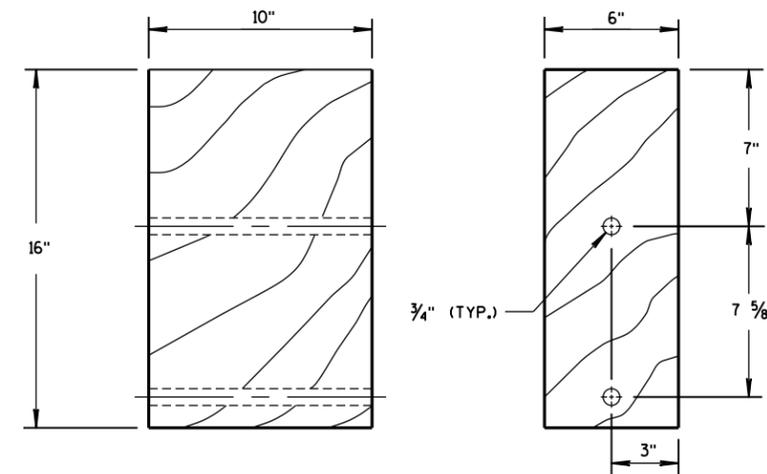
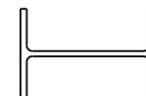
THREADED ROD (B1)

NOTE:  
WELDS ON OPPOSITE PLANES (i.e., VERTICAL AND LONGITUDINAL) SHALL NOT BE CONNECTED.

WELD DETAIL



W6x12 BEAM (A2)



NOTE:  
ACTUAL DIMENSIONS OF THE BLOCKOUT MAY VARY FROM THAT SHOWN DEPENDING ON ACTUAL DIMENSIONS OF THE BRIDGE PARAPET.

BLOCKOUT (A4)

## ANCHOR PLATE ASSEMBLY PARTS

RETROFIT CANTILEVER  
SLOPED END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE June 2014 /S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA

6

6

S.D.D. 14 B 49-1b

S.D.D. 14 B 49-1b

*Retrofit Cantilever Sloped End***References:**[Standard Spec 614](#)[FDM 11-45-30](#)

TRP 03-266-12

**Bid items associated with this drawing:**

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
614.0213	Steel Thrie Beam Structure Approach Retrofit Cantilever Sloped End .....	EACH

**Standardized Special Provisions associated with this drawing:**

<u>STSP NUMBER</u>	<u>TITLE</u>
NONE	

**Other SDDs associated with this drawing:**[SDD 14B20](#) Steel Thrie Beam Structure Approach**Design Notes:**

Use this retrofit alternative on 3R projects with an existing Class A thrie beam transition that is missing the first post upstream of a sloped end bridge parapet and it is not possible to install a new post. A flume, wing wall, shallow pipe or other object can prevent installing a post.

Review [FDM 11-45-30.5](#) and [FDM 11-45 Attachment 20.1](#) to determine if using the retrofit alternative is feasible. Type of work near thrie beam transition may influence what options are available.

Retrofit alternative is not for new installations of thrie beam transitions or new bridge parapets. These installations should be designed to accommodate all posts and proper grading of the thrie beam transition

Do not use this retrofit alternative in combination with other retrofits or thrie beam deficiencies. If other deficiencies can be repaired (e.g. torn thrie beam rail or busted post is repaired...) then it is acceptable to use retrofit alternative. If a significant amount of repair is required, installing a new transition may be the best choice

Review parapet for adequate thickness, embedment depth, cover, and condition. If these are not reviewed, installing retrofit alternative may damage or increase the damage to and existing parapet. WisDOT has used various sloped end designs in the past. Retrofit may not fit all possible sloped installations.

**Contact Person:**

Erik Emerson (608) 266-2842